

IN THE CLAIMS:**Listing of Claims:**

- 1 **Claim 1.** (currently amended) An emitter locator system, comprising:
- 2 a mobile DF set, said set comprising a receiver for receiving incident signal
- 3 transmissions;
- 4 a second DF set in communication with said mobile DF set, said second set
- 5 comprising a receiver for receiving incidental signal transmissions;
- 6 a line of bearing (LOB) generating system in operative communication with said
- 7 receivers and configured to generate lines of bearing from each said DF set responsive to
- 8 said received signal transmissions;
- 9 an LOB error generating system in operative communication with said line of
- 10 bearing generating system and configured to generate error bounds related to said lines of
- 11 bearing, said line of bearing generating system and said LOB error generating system
- 12 executed by a computing device, said computing device operatively generating a cross-
- 13 over point, said cross-over point defined as the intersection of a pair of sequential real-
- 14 time lines of bearing from each said mobile DF set, each said line of bearing
- 15 corresponding to a wireless transmission from said transmitter received by said mobile
- 16 DF set and said computing device then estimates a future position of said transmitter in
- 17 reference to said cross-over point;
- 18 a probability overlay generating system in operative communication with said
- 19 LOB error generating system and configured to generate an overlay probability map
- 20 responsive to said error bounds; and
- 21 display means for visually displaying said lines of bearing, said error bounds and
- 22 said overlay map.
- 1 **Claim 2.** (previously amended) The system of Claim 1, wherein:

2 said incident signal transmissions are further defined by strength and clarity
3 factors;

4 said line of bearing generating system further generates quality numbers for each
5 said line of bearing responsive to said strength and clarity factors; and

6 said LOB error generating system generates said error bounds responsive to said
7 quality numbers.

1 ~~**Claim 3.** (currently canceled) The system of Claim 2, further comprising a second DF~~
2 ~~set in communication with said mobile DF set, said second set comprising a receiver for~~
3 ~~receiving incidental signal transmissions, the system further comprising:~~

4 ~~said line of bearing generating system;~~

5 ~~said LOB error generating system;~~

6 ~~said probability overlay generating system; and~~

7 ~~said display means for further visually displaying said lines of bearing, said error~~
8 ~~bounds and said overlay map, said lines of bearing generated by said mobile DF set and~~
9 ~~said second DF set.~~

1 **Claim 4.** (currently amended) The system of Claim 32, wherein said display means of
2 said mobile DF set further displays said lines of bearing generated by said second DF set.

1 **Claim 5.** (currently amended) The system of Claim 2, wherein at one said mobile DF
2 set further comprises a position estimating system for determining the spacial location of
3 said transmitter responsive to said lines of bearing and said LOB errors.

1 **Claim 6.** (original) The system of Claim 5, wherein said display means further displays
2 said spacial location of said transmitter.

1 **Claim 7.** (original) The system of Claim 6, wherein said probability overlay generating
2 system is further responsive to said spacial location of said transmitter.

1 **Claim 8.** (original) The system of Claim 7, wherein said probability overlays comprise
2 a two-dimensional composite of concentric shapes.

1 **Claim 9.** (previously presented) The system of Claim 8, wherein said concentric shapes
2 comprise an inner shape concentric to an outer shape, said inner shape configuration
3 representative of said error bounds having relatively small values and said outer shape
4 configuration representative of said error bounds having relatively large values.

1 **Claim 10.** (currently amended) A direction-finding method comprising the steps of:

2 establishing a cross-over position point, said cross-over point defined as the
3 intersection between LOBs generated by at least two receiver receiving incident
4 electronic signal;

5 relocating one said receiver to a new receiver spacial location;

6 said receiver at said new receiver position receiving a transmission from a
7 transmitter at a transmitter position;

8 determining a real-time line of bearing from said receiver at said new receiver
9 position to said transmitter;

10 generating a connecting vector from said real-time line of bearing to said cross-
11 over position point; and

12 identifying a real-time position of said transmitter along said connecting vector;-

13 displaying said real-time position on a user display panel; and

14 generating and displaying a probability overlay map responsive to said real-time
15 position and a quality factor on said user display panel.

1 **Claim 11.** (original) The method of Claim 10, wherein said identifying step further
2 comprises assigning a probability factor to said real-time position of said transmitter
3 responsive to said quality factor and said probability overlay map generating and
4 displaying is responsive to said probability factor.

1 **Claim 12.** (original) The method of Claim 11, further comprising a repeating step to
2 repeat said relocating, receiving, determining, generating, identifying, displaying and
3 generating steps until said probability factor exceeds a predetermined threshold value.

1 **Claim 13.** (original) The method of Claim 11, further comprising a repeating step to
2 repeat said relocating, receiving, determining, generating, identifying, displaying and
3 generating steps until said probability factor meets a user-defined threshold value.

1 **Claim 14.** (original) The method of Claim 11, further comprising a repeating step to
2 repeat said relocating, receiving, determining, generating, identifying, displaying and
3 generating steps until a user terminates said direction finding method.